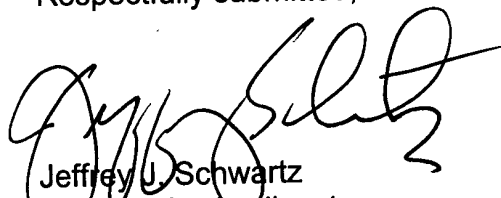


APPLICANT: YIASEMIDES, G. et al.
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REMARKS

Pursuant to 37 C.F.R. §1.121(c)(ii), a marked-up copy of these claims is included with this Preliminary Amendment and labeled as "Exhibit A". It is believed that this application is now in condition for allowance. Such action at an early date is respectfully requested.

Respectfully submitted,


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AMENDED CLAIMS - MARKED-UP COPY
(International Patent Application No. PCT/GB00/00627)

4. (Amended) A mould according to [any of claims 1 to 3] claim 1, characterized in that the first material comprises steel.
7. (Amended) A mould according to [claims 5 and 6] claim 5, characterized in that the first material comprises H13 or AISI 420.
8. (Amended) A mould according to [any of the preceding claims] claim 1, characterized in that the second material comprises copper or a copper alloy.
11. (Amended) A mould according to [any of the preceding claims] claim 1, characterized in that the third material comprises nickel or a nickel alloy.
12. (Amended) A mould according to [any of the preceding claims] claim 1, characterized in that the second part is in the form of one or more inserts (22, 24, 26) locatable in one or more recesses (16, 18, 20) in the first part (12).
13. (Amended) A mould according to [any of the preceding claims] claim 1, characterized in that the first part (12) provides a required minimum thickness of material for all of the mould surface (14).

15. (Amended) A mould according to [any of the preceding claims] claim 1, characterized in that the third part is in the form of a coating on the first or second part or both.

17. (Amended) A mould according to [claims 15 and 16] claim 15, characterized in that the coating is formed by electroplating and is 5 to 50µm thick.

19. (Amended) A mould according to [any of the preceding claims] claim 1, characterized in that holes (28) are provided extending through at least the first part to permit ejector pins to extend therethrough for rejection of items from the mould (10), or for core pins or slides.

20. (Amended) A mould according to [any of the preceding claims] claim 1, characterized in that passages (32) are provided extending through the first (12) and/or second (22, 24, 26) parts to permit cooling fluids and/or heating elements to extend therethrough.

22. (Amended) A mould according to [claims 20 or 21] claim 20, characterized in that an insert (34) of the first material is provided in the second part (26) to receive a passage (32) from the first part (12), or vice versa.

23. (Amended) A mould according to [any of the preceding claims] claim 1, characterized in that the mould comprises a number of cooperable parts, with each part being according to the invention.

26. (Amended) A mould according to [any of claims 23 to 25] claim 23, characterized in that insert members (50) are provided in the second part (26).

28. (Amended) A mould according to [claims 26 or 27] claim 26, characterized in that the insert members (50) are of the first material.

29. (Amended) A mould according to [any of claims 23 to 28] claim 23, characterized in that the first part (12) is in the form of a generally constant thickness layer (56) on the second member (54).

31. (Amended) A mould according to [any of claims 23 to 30] claim 23, characterized in that the part of the first part (12) which faces the second part and/or the part of the second part which faces the first part (12) have a relatively large surface area.

34. (Amended) A mould according to [claims 32 or 33] claim 32, characterized in that corresponding interengaging formations are provided on each of the first and second parts.

35. (Amended) A method of making a mould, characterized in that the mould (10, 40, 44, 48, 52, 58, 62, 74, 80, 90, 100) is according to [any of the preceding claims] claim 1.

38. (Amended) A method according to [claims 36 or 37] claim 36, characterized in that the composite blank is formed by locating the first, second and third materials together and subjecting to hot isostatic pressing to form metallic bonds respectively between the first and third, and second and third materials.

40. (Amended) A method according to [claims 38 or 39] claim 38, characterized in that the pressing takes place at a temperature of 400 to 1350°C.

41. (Amended) A method according to [any of claims 38 to 40] claim 38, characterized in that the pressing takes place at a pressure of 400 to 3000 bar.

42. (Amended) A method according to [any of claims 39 to 41] claim 39, characterized in that the sealed container is substantially evacuated of fluids prior to pressing.

43. (Amended) A method according to [claims 36 or 37] claim 36, characterized in that the composite blank may be formed by locating the first, second and third materials together and subjecting to uniaxial pressing to form metallic bonds respectively between the first and third, and second and third materials.

44. (Amended) A method according to [any of claims 38 to 43] claim 38, characterized in that the third part is applied on to the first (12) or second part by electroplating.

45. (Amended) A method according to [any of claims 38 to 43] claim 38, characterized in that the third part is provided as a foil or applied by electroless plating.

46. (Amended) A method according to [any of claims 35 to 45] claim 35, characterized in that the mould is heat treated before and/or after machining.

47. (Amended) A method according to [any of claims 35 to 46] claim 35, characterized in that the second part may be formed by machining.

48. (Amended) A method according to [any of claims 35 to 47] claim 35, characterized in that where the second part is in the form of one or more inserts (22, 24, 26) locatable in one or more cavities (16, 18, 20) in the first part (12), the second part is formed by filling the or each cavity (16, 18, 20) in the first part (12) with the second material in powder form, which powder forms the second part (22, 24, 26) during uniaxial or hot isostatic pressing.

49. (Amended) A method according to [any of claims 35 to 47] claim 35, characterized in that where the second part (22, 24, 26) is in the form of one or more sheets locatable in one or more cavities in the first part, the second part (22, 24, 26) is cast in the or each

cavity (16, 18, 20) in the first part (12).

50. (Amended) A method according to [claims 48 or 49] claim 48, characterized in that the walls of the or each cavity (16, 18, 20) are initially coated with a layer of the third material.

52. (Amended) A method according to [any of claims 35 to 51] claim 35, characterized in that where the first part (12) is in the form of a substantially constant thickness layer, the underside (non-moulding surface) of the first part (12) is machined from a block of first material.

56. (Amended) A method according to [claims 54 or 55] claim 54, characterized in that once the second part (54) has been formed and bonded to the underside of the mould surface of the first part (12), the first part (12) is formed by machining.

57. (Amended) A method according to [any of claims 35 to 56] claim 35, characterized in that the first part (12) is formed by hot isostatic or uniaxial pressing of powdered first material.

60. (Amended) A method according to [claims 58 or 59] claim 58, characterized in that the first part (84) is formed as layer (84) between two formers (78, 82).

63. (Amended) A method according to [claims 61 or 62] claim 61, characterized in that the former (78) is made of steel, graphite or ceramic.

68. (Amended) A mould according to [any of claims 65 to 67] claim 65, characterized in that the channels (64, 94) have a width and depth of between 2 and 10mm.

69. (Amended) A mould according to [any of claims 65 to 68] claim 65, characterized in that the channels (64, 94) are lined with pipes (68, 96).

73. (Amended) A mould according to [any of claims 66 to 73] claim 66, characterized in that the first part (70, 98) and/or the base part (66, 92) are made of a tool or mould steel.

75. (Amended) A mould according to [any of claims 65 to 74] claim 65, characterized in that the third material is nickel or a nickel alloy.

76. (Amended) A mould according to [any of claims 65 to 75] claim 65, characterized in that a second part (76, 102) is provided on the surface of the base part (66, 104).

78. (Amended) A mould according to [claims 76 or 77] claim 76, characterized in that a layer of third material is provided between the second part (76, 102) and the base part (66, 104).

79. (Amended) A mould according to [any of claims 76 to 78] claim 76, characterized in that the second part (76, 102) is in the form of a substantially uniform thickness layer.

81. (Amended) A mould according to [any of claims 76 to 80] claim 76, characterized in that the second material comprises copper or a copper alloy.

82. (Amended) A mould according to [any of claims 65 to 81] claim 65, characterized in that the first part (70, 98) is in the form of a substantially uniform thickness layer.

84. (Amended) A method of forming a mould according to [any of claims 65 to 83] claim 65.

87. (Amended) A method according to [claims 85 or 86] claim 85, characterized in that the slots are lined with pipes (68, 96) which during the hot isostatic pressing expand to fill the slots (64, 94).

88. (Amended) A method according to [claims 85 or 86] claim 85, characterized in that the pipes (68, 96) are filled with a sacrificial powder such as graphite which is subsequently removed.

89. (Amended) A method according to [any of claims 84 to 88] claim 84, characterized

